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TITLE: FOLDABLE PUSHCHAIR.

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INVENTOR-INFORMATION:

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EUR-CL (EPC): B62B007/08

US-CL-CURRENT: **280/642**

ABSTRACT:

CHG DATE=19990617 STATUS=O> The present invention relates to a pushchair having a folding telescopic structure (A) and a reversible chair part (B), and which can be folded and deployed regardless of the position of the chair part (B), in which pushchair the structure (A) includes a front structure (2), a rear structure (3), an articulation arm (4), and a handle (1) which can slide on the front structure (2), characterised in that the chair part (B) is mounted on the front structure (2) via sliding articulations (12) which are located in the transverse axis of the chair part (B) and on the rear structure (3) via connecting rods (11) which are articulated onto the chair part (B) and onto slideways (9) capable of assuming, on the rear structure (3), a position chosen from among a plurality of predetermined positions, it being possible for the said structure to be folded and deployed regardless of the position of the chair part (B), which is a function of the said position chosen, and it being possible for the said structure (A) in the folded position to remain upright with the chair part (B) in a position substantially vertical with respect to the ground. <IMAGE>

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B62B 7/06

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None

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# (54) Foldable pushchair

(57) The rear frame 3 is pivotally attached to a joint moulding 6 fastened to the top of the front frame 2. Handle 1 is guided for sliding parallel to front frame 2 by moulding 6 and moulding 8. The lower end of handle 1 is pivotally connected to bracing strut 4 which is pivotally attached to rear frame 3. Upon release of a primary lock 7 and a safety lock 13 the handle 1 slides down and the frame 3 swings in to fold up the pushchair.

Frame 5 for the seat or tray is pivotally mounted on a sliding block 12 and held in one of five positions P1-P5 by means of linkage 11 coupled to adjusting member 9 which is locatable by knob 10 in different positions along the rear frame 3. On folding of the frame the block 12 slides down and independently of which position P1 to P5 is in use the frame 5 swings to a position generally parallel to frames 2 and 3.

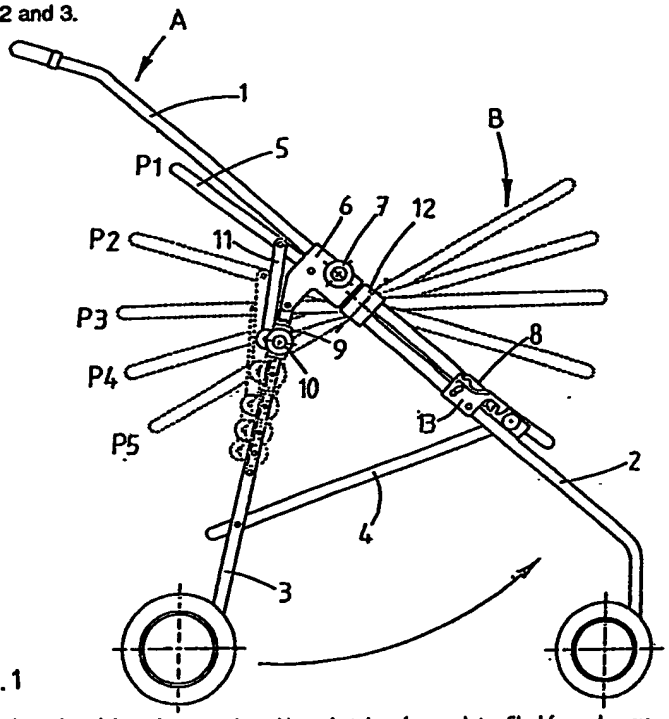


Fig. 1

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

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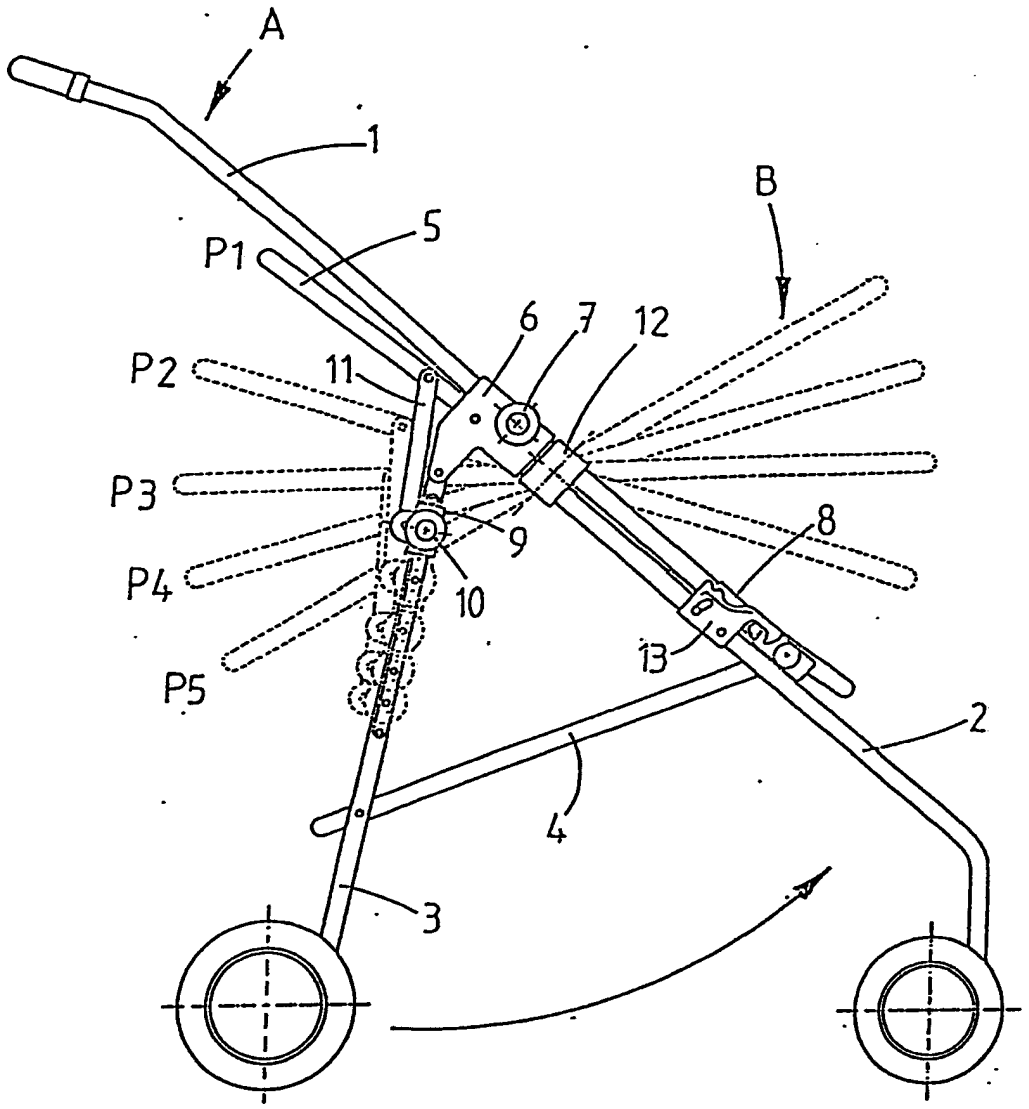


Fig. 1

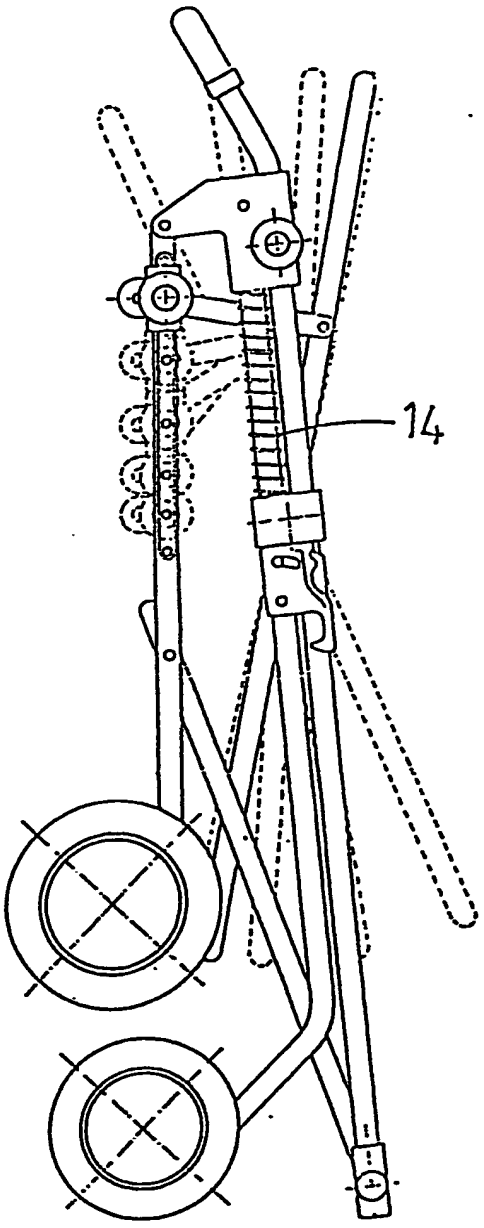


Fig. 2

# FOLDING PUSHCHAIR

This invention relates to a pushchair with telescopic folding action with reversible seat, which can be opened and folded with the seat in any of five positions, standing up and with the seat in a vertical position towards the ground avoiding space problems and misuse of the product on the referred operation.

Pushchairs with a telescopic folding action are frequently used in the market but none of them have the possibility of being opened and folded without moving the seat into the facing forward position parallel to the front structure of the chassis.

This invention avoids all the inconveniences in a way that every possible misuse on the folding of a telescopic pushchair when the seat was not properly located.

On the other hand this invention contributes for a better use of the space occupied by the pushchair when folded because the seat remains in a vertical position (without any action of the seat), against all the pushchairs known in the market in which the seat not properly located remains in an almost parallel position to the ground with all the inconveniences that that may cause.

One embodiment of the invention is shown by way of example in the accompanying drawings, in which:-

Figure 1 shows a pushchair in accordance with the invention with the chassis A in the erected condition and the seat or tray B in five different positions, and

Figure 2 shows the pushchair folded and standing up with the seat B vertical to the ground.

The pushchair has a handle 1, a front structure 2 carrying the front wheels, a rear structure 3 carrying the rear wheels, and an articulation arm or bracing strut 4. The rear structure 3 is pivotally attached to a joint moulding 6 which is attached to the upper end of the front structure 2. The arm 4 is pivotally connected at the rear end to the rear structure 3 and at the front end to the lower end of the handle 1. The handle 1 passes through the moulding 6 and can be secured by a lock knob 7 so that the moulding 6 serves as a primary lock. The handle 1 also

passes through a handle guide moulding 8 attached to the front structure 2. When the primary lock 6 and a safety catch 13 on the moulding 8 are released the handle 1 can slide through the mouldings 6 and 8 so that the strut 4 swings downward and the rear wheels are collapsed towards the front wheels. The collapsed state is shown in Figure 2.

The frame 5 of the seat or tray B is pivotally mounted on a sliding block 12 so that it can take up a generally horizontal position P3 or forwardly inclined positions P1 or P2 or rearwardly inclined positions P4 or P5. An adjusting mechanism 9 is securable by a knob 10 in any one of five positions along the rear structure 3 and is coupled to the frame 5 by a link 11 pivotally attached at both ends. When the pushchair is collapsed with the seat located in any of the five positions this linkage allows the frame 5 to take up a position more or less parallel to the front and rear structures. The pivot block 12 is coupled to the moulding 6 by a spring 14 and slides to a position adjacent the moulding 8 when the pushchair is collapsed.

## ADJUSTING AND REGULATION OF THE SEAT

The seat B is assembled on the chassis A through two adjusting mechanism 9, connecting rods 11 with two pivot points in 9 and B and in the sliding articulation 12 where it has its axis. Pulling both knobs 10 the adjusting mechanism 9 will slide in the rear structure 3, being possible its adjustment in one of the five positions, being the positions P1 and P2 facing forward, position P3 horizontal, and position P4 and P5 facing backwards.

## FOLDING OF THE CHASSIS

To fold the chassis release the knob 7 in order to slide the handle 1 through the spring moulding 6 and 8 until the safety lock 13 is engaged. Afterwards, releasing the safety lock 13, the handle 1 slides down completely until it is closed which in the vertical position of the handle 1 allows the chassis to stand up.

This movement is valid on any of the five positions of the seat B, due to the corrected action during the chassis folding of the adjusting mechanism knob, connecting rods 11 and the sliding

articulation 12 pulled by the springs 14, which allows the seat to maintain its vertical position, occupying a small space and avoiding any possible misuse which may cause damage to the chassis structure.

CLAIMS:

1. Pushchair with telescopic folding action and reversible seat which opens and folds on any position of the seat, characterized by the possibility of the chassis being opened and closed with a seat B assembled on the chassis A in any of the five positions P1, P2, P3, P4, P5 by connected action of the adjusting mechanism 9, connecting rods 11 with pivot points in 9 and B and in the sliding articulation 12 where it has its axes, standing up with the seat in the vertical position.

2. Pushchair with telescopic folding action and reversible seat which opens and folds on any position of the seat according with claim 1, characterised by achieving the folding action when releasing the knobs 7, allowing the handle 1 to slide in parallel with the frontal structure 2 pulled by the springs 40 until the safety lock 13 is on and, after releasing the safety lock the handle 1 with slide until the complete folding of the chassis A which in the vertical position of the handle 1 stands up, in any of the seat positions.

3. A folding pushchair comprising a front structure carrying the front wheels, a rear structure carrying the back wheels, a pivotal connection between the front and rear structures to allow these structures to collapse towards each other, a handle guided for movement parallel to the front structure, a bracing strut pivotally connected at one end to the rear structure and at the other end to the lower part of the handle, a lock for securing the handle against movement relative to the front structure when the pushchair is in the erected condition, a pivotally mounted seat or tray coupled by a linkage to an adjustment mechanism on the rear structure, and a pivot block for the seat or tray which is slidable parallel to the front structure upon folding of the pushchair.

**Patents Act 1977**
**Examiner's report to the Comptroller under Section 17 (The Search Report)**

Application number
9125869.9

**Relevant Technical fields**

(i) UK Cl (Edition K ) B7B (BTFI)

(ii) Int Cl (Edition 5 ) B62B

Search Examiner
PAT EVERETT

**Databases** (see over)

(i) UK Patent Office

(ii)

Date of Search
30 MARCH 1992

Documents considered relevant following a search in respect of claims ALL

| Category (see over) | Identity of document and relevant passages | Relevant to claim(s) |
|---|---|---|
| | NONE | |



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| Category | Identity of document and relevant passages | Relevant to claim(s) |
|---|---|---|
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E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

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